

## Exogenous pigmentation in toes feigning ischemia of the extremities: a diagnostic challenge brought by arthropods of the Diplopoda Class ("millipedes")

Pigmentação exógena em pododáctilos simulando isquemia de extremidades: um desafio diagnóstico provocado por artrópodos da classe Diplopoda ("piolhos-de-cobra")\*

Carlos Alberto Jatobá Lima <sup>1</sup>  
Antônio Magela <sup>3</sup>  
Sinésio Talhari <sup>5</sup>

João Luiz Costa Cardoso <sup>2</sup>  
Francisco G. M. de Oliveira <sup>4</sup>  
Vidal Haddad Junior <sup>6</sup>

**Abstract:** A 24 year-old patient reported having stepped on a millipede. When examined the patient presented cyanotic and erythematous macules on the first three toes of his right foot, and also complained of local pain and paresthesia, with palpable arterial flows. Millipedes are cylindrical segmented arthropods that when threatened form into curls and release quinones and other irritant and pigmentary substances. The cyanotic color reminds ischaemic tissular distress fact that may confuse professionals in Emergency Rooms when the clinical report is unclear.

**Keywords:** Arthropods; Brazil; Dermatology; Poisonous animals

**Resumo:** Um paciente de 24 anos relatou ter pisado em um "piolho de cobra". Ao ser examinado, este apresentava máculas eritemato-cianóticas, nos três primeiros pododáctilos do pé direito, com queixas de dor local e parestesias, com fluxos arteriais palpáveis. Os diplopodas são artrópodos cilíndricos segmentados que assumem posição enrodilhada - quando ameaçados - liberam quinonas e outros agentes irritativos e pigmentantes. A coloração de aspecto cianótico lembra sofrimento tissular isquêmico, o que pode confundir profissionais em atendimentos de Emergência, quando a história não apresenta clareza e coerência. **Palavras-chave:** Animais venenosos; Artrópodes; Brasil; Dermatologia

Approved by the Editorial Board and accepted for publication on 06.02.2010 .

\* Study carried out in the Amazonas Foundation of Tropical Medicine - Manaus (AM), Brazil.

Conflict of interest: None / *Conflito de interesse: Nenhum*

Financial funding: None / *Suporte financeiro: Nenhum*

<sup>1</sup> Veterinarian, Management of Poisonous Animals, Amazonas Foundation of Tropical Medicine - Manaus (AM), Brazil

<sup>2</sup> Medical Doctor, Management of Poisonous Animals, Amazonas Foundation of Tropical Medicine - Manaus (AM), Brazil

<sup>3</sup> Medical Doctor, Management of Poisonous Animals, Amazonas Foundation of Tropical Medicine - Manaus (AM), Brazil

<sup>4</sup> Medical Doctor, Management of Poisonous Animals, Amazonas Foundation of Tropical Medicine - Manaus (AM), Brazil

<sup>5</sup> Dermatologist, President Director, Amazonas Foundation of Tropical Medicine - Manaus (AM), Brazil

<sup>6</sup> Dermatologist, Assistant Professor, Botucatu Medical School, São Paulo State University - São Paulo (SP), Brazil



Photograph: Carlos Alberto Jatobá Lima

FIGURE 1: Pigmentation and inflammation on the right-foot toes of the patient, feigning ischaemic cyanosis



Photograph: Vidal Haddad Junior

FIGURE 2: "Millipede". This arthropod releases toxins whenever it feels threatened or when it is crushed

A 24-year-old male patient was examined in the morning of 6<sup>th</sup> August 2009, reporting that he had stepped on a "millipede". On that occasion it was observed cyanotic and erythematous macules on the first three toes of his right foot, and the patient also complained of local pain and paresthesia (Picture 1). The patient presented palpable arterial flows and absence of cutaneous necrosis. The procedure followed was analgesia and observation. After some days the inflammatory characteristics had disappeared but the hyperchromic pigmentation (actually, brown colour) was still present in December, 2009.

The "millipedes" called in Portuguese language "gongolôs" or "embuás" are cylindrical segmented arthropods of the Diplopoda Class that when threatened form into curls and release quinones and other irritant and pigmentary substances to defend themselves (Pictures 2 and 3)<sup>1,2</sup>. The cyanotic color reminds ischaemic tissular distress that may confuse professionals in Emergency Rooms when the clinical report is not clear. The pigmentation remains for months.<sup>1,2</sup>

REFERENCES

1. Haddad Jr V, Cardoso JLC, Rotta O, Eterovic A. Acidentes provocados por Millipede com manifestações dermatológicas: relato de dois casos. An Bras Dermatol. 2000;75: 471-4.
2. Cardoso JLC, França FOS, Hui FH, Malaque CMS, Haddad Jr V. Animais peçonhentos no Brasil: biologia, clínica e terapêutica dos acidentes. São Paulo: Editora Sarvier; 2003. p. 258-64.



Photograph: Vidal Haddad Junior

FIGURE 3: Defense position of a Diplopoda (forming into curls)

MAILING ADDRESS / ENDEREÇO PARA CORRESPONDÊNCIA:  
Vidal Haddad Junior  
Caixa Postal 557  
18618 000 - Botucatu, SP - Brasil  
Phone./fax: 14 3882 4922  
e-mail: haddadjr@fmb.unesp.br

How to cite this article/Como citar este artigo: Lima CAJ, Cardoso JLC, Magela A, Oliveira FGM, Talhari S, Haddad Jr V. Exogenous pigmentation in toes feigning ischemia of the extremities: a diagnostic challenge brought by arthropods of the Diplopoda Class ("millipedes"). An Bras Dermatol. 2010;85(3):391-2.